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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/634,552	08/08/2000	Ahmadreza Rofougaran	36601/CAG/B600	4410

7590 07/16/2007  
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CHICAGO, IL 60661

EXAMINER
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LY, NGHI H

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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07/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/634,552

Applicant(s)

ROFOUGARAN ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24,32-43,51-77,85-90,92-105,112-123 and 164 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24,32-43,51-77,85-90,92-105,112-123 and 164 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-15, 19-21, 32-43, 51-77, 85-90, 92-96, 100-102, 112-118, 122, 123, and 164 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al (US 6,366,622).

Regarding claims 1, 51, 66 and 85, Brown teaches a method of wireless communications using a transceiver having a receiver and transmitter (see Title, Abstract, fig.4 and fig.5), comprising: programming one of the receiver and the transmitter to process communication protocol for a local area network or a personal area network (see column 4, lines 63-67, column 7, lines 3-13, column 7, lines 60-64, column 2, lines 1-6 and column 22, lines 2-8), receiving a first signal at the receiver from a wireless source (see Title, Abstract, fig.4 and fig.5), and transmitting a second signal from the transmitter into space (see Title, Abstract, fig.4 and fig.5), wherein the

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programming comprises programming a demodulator with a demodulation (see Abstract, column 7, lines 2-21, column 8, lines 25-36, column 10, lines 16-31 and column 23, lines 50-57).

Regarding claims 32 and 112, Brown teaches a method an apparatus for wireless communications using a receiver (see Title, Abstract, fig.4, fig.5, column 21, lines 52-55, column 23, line 1-6, see "transceiver" and "integrated circuit"), transmitter and local oscillator (see column 4, lines 57-76, see "transmitter", column 2, lines 39-44, column 7, lines 60-67 and column 8, lines 8-21, see "oscillator"), comprising: programming one of the receiver and the transmitter to process communication protocol for a local area network or personal area network column 2, lines 1-6 and column 22, lines 2-8), programming a frequency of a clock in the local oscillator (see column 35, lines 8-15 and column 29, line 61 to column 30, line 12), receiving a first signal at the receiver from a wireless source (see Title, Abstract, fig.4, fig.5, column 21, lines 52-55), downconverting the received first signal with the clock (see column 8, lines 8-21, column 10, lines 16-31 and column 11, lines 49-61), upconverting a second signal with the clock (see column 8, lines 8-21, column 10, lines 16-31 and column 11, lines 49-61), and transmitting the upconverted second signal from the transmitter into space (see column 8, lines 8-21, column 10, lines 16-31 and column 11, lines 49-61), the programming comprises programming a demodulator with a demodulation (see Abstract, column 7, lines 2-21, column 8, lines 25-36, column 10, lines 16-31 and column 23, lines 50-57).

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Regarding claims 2-10, 13, 33, 35-37, 42, 43, 52-58, 67-70, 86-90, 92-95, 113-117, 122 and 123, Brown further teaches that the transmission/reception of the first/second signal comprises filtering the signal with a filter and amplifying the signal with an amplifier, and the programming comprises programming a frequency band of the filter and programming gain of the amplifier (see Title, Abstract, fig.4, fig.5).

Regarding claims 11, 12 and 59, Brown further teaches that his receiver component comprises a second amplifier having a programmable gain, and the receiver also comprises a second filter coupled to the second amplifier and having a programmable frequency band, and a demodulator coupled to the second filter and having programmable demodulation (see Title, Abstract, fig.4, fig.5).

Regarding claims 14, 38-41, 72, 96 and 118, Brown teaches that the downconversion comprises mixing the first signal with a clock and that second clock is mixed with a third clock (see column 8, lines 8-21, column 10, lines 16-31 and column 11, lines 49-61).

Regarding claims 15, 19, 20, 21 and 100-102, Brown teaches upconverting the second signal before transmission into space with a second clock that is mixed with a third clock (see column 8, lines 8-21, column 10, lines 16-31 and column 11, lines 49-61).

Regarding claim 34, the combination of Brown further teaches the received first signal is downconverted to an intermediate frequency signal (see column 8, lines 8-21, column 10, lines 16-31 and column 11, lines 49-61).

Regarding claims 60-65, Brown teaches that a local oscillator (LO) is coupled to the receiver and transmitter (see column 2, lines 26-39). The LO comprises a clock generator which outputs a clock to the receiver and transmitter (see column 2, lines 26-39). The transmitter comprises a mixer to mix the clock with the baseband signal (see column 25, lines 11-15). The transmitter further comprises an amplifier and filter coupled to the mixer (see

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column 2, lines 26-34 and column 10, lines 32-44), the amplifier or filter can both be the programmable transmitter component (see Abstract). The transmitter also has a mixer (see column 2, lines 26-34 and column 10, lines 32-44).

Regarding claims 71, Brown further teaches that his transmitter component comprises a second filter with a programmable frequency band to filter a baseband signal, and wherein the transmitter further comprises a third mixer coupled to the second filter to mix the clock with the filtered baseband signal (see Abstract, column 2, lines 26-34 and column 10, lines 32-44), and a second amplifier coupled to the third mixer and having a programmable gain (see column 2, lines 26-34 and column 10, lines 32-44).

Regarding claims 73-76, Brown further teaches that the second clock generator comprises an oscillator and a divider coupled to the oscillator, the divider having a control input coupled to the controller to program a frequency of the second clock (column 25, lines 10-15). The clock generator comprises a voltage controlled oscillator (VCO) to generate the clock, the VCO having a frequency different than that of the clock and a mixer is coupled to both the divider and the VCO (see column 10, lines 51-54 and column 11, lines 57-61). The divider also comprises a control input coupled to the controller to program the frequency of the clock (see column 2, lines 45-49).

Regarding claim 77, Brown further teaches that the clock generator further comprises a phase lock loop having a control input coupled to the controller to program the frequency of the VCO (column 2, lines 26-30 and column 10, lines 51-54).

Regarding claim 164, Brown teaches the communication protocol is associated with one of HomeRF, 802.11 and Bluetooth (see column 3, lines 10-13, column 3, lines 25-29 and column 21, lines 24-42).

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4. Claims 16-18, 22-24, 97-, 103-105 and 119-121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US 6,366,622) in view of Chen et al (US 5,940,456).

Regarding claims 16, 22, 97, 103 and 119, Brown teaches claims 1, 32, 51, 85 and 112. Brown does not specifically disclose generating the third clock by dividing the second clock by an integer N.

Chen teaches generating the third clock by dividing the second clock by an integer N (see column 7, lines 26-30).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Chen into the system of Brown in order to allow multiple data streams to be transmitted from one point to another (see Chen, column 2, lines 39-42).

Regarding claims 17, 18, 23, 24, 98, 99, 104, 105, 120 and 121. Brown teaches claims 1, 32, 51, 85 and 112. Brown does not specifically disclose the clock comprises a frequency  $f_{Lo}$  equal to  $f_{vco} (N+1)/N$  wherein  $f_{vco}$  equals a frequency of the second clock where  $N=2$ .

Chen teaches the clock comprises a frequency  $f_{Lo}$  equal to  $f_{vco} (N+1)/N$  wherein  $f_{vco}$  equals a frequency of the second clock and where  $N=2$  (see column 7, lines 26-30).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Chen into the system of Brown in order to allow multiple data streams to be transmitted from one point to another (see Chen, column 2, lines 39-42).

### **Response to Arguments**

5. Applicant's arguments with respect to claims 1-24, 32-43, 51-77, 85-90, 92-105, 112-123 and 164 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly

